Amendments to the Claims

Listing of Claims:

Cancel claims 1-11.

Claim 12 (new). A method for producing a three-dimensionally formed armoring component for vehicle bodies, which comprises the steps of:

producing sheet metal preforms from hardenable steel by the steps of:

thermally pre-treating a steel sheet blank by selecting a heating speed and a heating temperature until an austenitic state or partly austenitic state, dependent on alloy content, is reached resulting in an austenitized steel sheet blank;

carrying out hot forming and quench hardening of the austenitized steel sheet blank in one operation, by the steps of:

forming the austenitized steel sheet blank in a press die within a time of at most 90 seconds resulting in a formed component;

holding the formed component in full-area contact with the press die resulting in cooling of the formed component in the press die being in a closed state; and

performing the cooling of the formed component in the closed press die at a cooling rate corresponding at least to a material-specific critical cooling rate.

Claim 13 (new). The method for producing the three-dimensionally formed armoring component for vehicle bodies according to claim 12, which further comprises forming the steel sheet blank from a sheet of hardenable and maraging steel.

Claim 14 (new). The method for producing the three-dimensionally formed armoring component for vehicle bodies according to claim 12, which further comprises forming the steel sheet blank with an initial hardness, during hardening in hardening oil, to be higher than 45 HRC or with a hardness after artificial ageing to be higher than 45 HRC.

Claim 15 (new). The method for producing the three-dimensionally formed armoring component for vehicle bodies according to claim 12, wherein during heating to the heating temperature being an austenitizing temperature, the alloy content being alloying elements are dissolved predominantly in austenite.

Claim 16 (new). The method for producing the three-dimensionally formed armoring component for vehicle bodies according to claim 12, which further comprises selecting a heat treatment time and the heating temperature for austenitization in dependence on a component material and material thickness to minimize scaling, skin decarburization and grain growth.

Claim 17 (new). The method for producing the three-dimensionally formed armoring component for vehicle bodies according to claim 12, which further comprises forming the austenitized steel sheet blank at an austenitizing temperature dependent on the alloy content or at temperatures at which the steel sheet blank is in the partly austenitized state.

Claim 18 (new). The method for producing the three-dimensionally formed armoring component for vehicle bodies according to claim 12, which further comprises, after the forming step, holding the press die closed for a period of time of at least 50 to 500 seconds to achieve a desired cooling temperature.

Claim 19 (new). The method for producing the three-dimensionally formed armoring component for vehicle bodies according to claim 12, which further comprises cooling the press die with a coolant.

Claim 20 (new). The method for producing the three-dimensionally formed armoring component for vehicle bodies according to claim 19, which further comprises selecting the coolant from the group consisting of water, ammonia, compressed air, and a combination of at least one of water, ammonia and compressed air.

Claim 21 (new). The method for producing the three-dimensionally formed armoring component for vehicle bodies according to claim 12, which further comprises subjecting the formed component after the cooling step, to a final heat treatment in a form of expansion and/or tempering.

Claim 22 (new). The method for producing the three-dimensionally formed armoring component for vehicle bodies according to claim 12, which further comprises subjecting the formed component after the cooling step to a further step of retreating by tempering, hardening and tempering, age hardening or artificial ageing.

Claim 23 (new). A method for producing a three-dimensionally formed armoring component for vehicle bodies, which comprises the steps of:

producing sheet metal preforms from hardenable steel by the steps of:

thermally pre-treating a steel sheet blank by selecting a heating speed and a heating temperature at least until an austenitic state or partly austenitic state, dependent on an alloy content, is reached resulting in an austenitized steel sheet blank;

carrying out hot forming and quench hardening of the austenitic steel sheet blank in one operation, by the steps of:

cooling a press die to at least approximately 70° C;

forming the austenitized steel sheet blank still in the austenitic state or the partly austenitic state in the press die resulting in a formed component;

holding the formed component in full-area contact with the press die being a closed press die; and

performing further cooling of the formed component without calibration, but with a pressing force being maintained, for dissipating heat from the formed component in the press die.

Claim 24 (new). The method for producing the three-dimensionally formed armoring component for vehicle bodies according to claim 23, which further comprises forming the steel sheet blank from a sheet of hardenable and maraging steel.

Claim 25 (new). The method for producing the three-dimensionally formed armoring component for vehicle bodies according to claim 23, which further comprises forming the steel sheet blank with an initial hardness, during hardening in hardening oil, to be higher than 45 HRC or with a hardness after artificial ageing to be higher than 45 HRC.

Claim 26 (new). The method for producing the three-dimensionally formed armoring component for vehicle bodies according to claim 23, wherein during heating to the heating temperature being an austenitizing temperature, the alloy content being alloying elements are dissolved predominantly in austenite.

Claim 27 (new). The method for producing the three-dimensionally formed armoring component for vehicle bodies according to claim 23, which further comprises selecting a heat treatment time and the heating temperature for austenitization in dependence on a component material and material thickness to minimize scaling, skin decarburization and grain growth.

Claim 28 (new). The method for producing the three-dimensionally formed armoring component for vehicle bodies according to claim 23, which further comprises forming the austenitized steel sheet blank at an austenitizing temperature dependent on the alloy content or at temperatures at which the steel sheet blank is in the partly austenitized state.

Claim 29 (new). The method for producing the three-dimensionally formed armoring component for vehicle bodies according to claim 23, which further comprises, after the forming step, holding the press die closed for a period of time of at least 50 to 500 seconds to achieve a desired cooling temperature.

Claim 30 (new). The method for producing the three-dimensionally formed armoring component for vehicle bodies according to claim 23, which further comprises cooling the press die with a coolant.

Claim 31 (new). The method for producing the three-dimensionally formed armoring component for vehicle bodies according to claim 30, which further comprises selecting the coolant from the group consisting of water, ammonia, compressed air, and a combination of at least one of water, ammonia and compressed air.

Claim 32 (new). The method for producing the three-dimensionally formed armoring component for vehicle bodies according to claim 23, which further comprises subjecting the formed component after the cooling step, to a final heat treatment in a form of expansion and/or tempering.

Claim 33 (new). The method for producing the three-dimensionally formed armoring component for vehicle bodies according to claim 23, which further comprises subjecting the formed component after the cooling step to a further step of retreating by tempering, hardening and tempering, age hardening or artificial ageing.